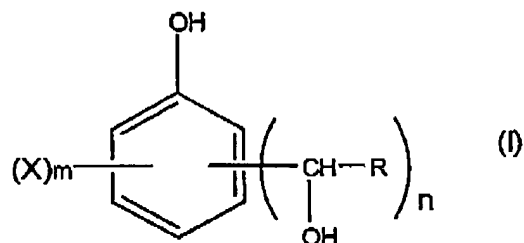


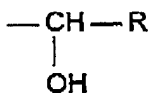
Docket 2000FR302
 Serial No. 09/778,353
 Group 1621

1. (currently amended) New phenolic compounds derived from dialkoxyethanals of formula (I)



In which

- R is a dialkoxymethyl group with from 3 to 17 carbon atoms, a 1,3-dioxolan-2-yl group optionally substituted on peaks 4 and/or 5 by one or more alkyl groups comprising from 1 to 8 carbon atoms or a 1,3-dioxan-2-yl group optionally substituted on peaks 4 and/or 5 and/or 6 by one or more alkyl groups comprising from 1 to 8 carbon atoms,
- n has the value 1, 2 or 3 and the group or groups

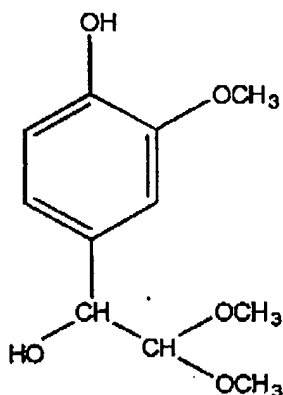


are in ortho and/or in para position of the OH group of the cycle

- m represents from 0 to 4-n and X represents a functional group such as selected from the group of: hydroxyl; or halogen; ~~such as chlorine, fluorine, bromine, iodine or an~~ an alkyl or alkoxy group comprising from 1 to 8 carbon atoms; or aryl group comprising from 5 to 12 carbon atoms and optionally 1 or 2 heteroatoms such as nitrogen or oxygen; or carboxy; or a -CO-Y group in which Y represents an alkyl or alkoxy radical containing from 1 to 8 carbon atoms or amido or amino or thiol radical, on condition that at least one of the ortho or para positions of the phenolic cycle is substituted by a hydrogen, with the

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exception of the compound 1

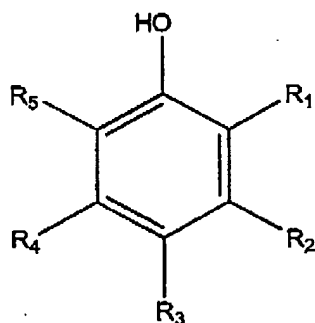


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and or their salts with the alkali metals, alkaline-earth metals and amines.

2. (currently amended) Preparation process for phenolic compounds of formula (I) according to claim 1, and or their salts with the alkali metals, alkaline-earth metals and amines characterized by the fact that comprising the steps of:

- reacting a phenol of formula (II)

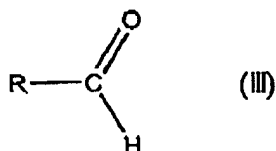


(II)

in which R_1 , R_2 , R_3 , R_4 , R_5 ~~can be a~~ are independantly selected from the group consisting of: hydroxyl radical; a halogen; such as chlorine, fluorine, bromine, iodine or an alkyl radical comprising from 1 to 8 carbon atoms; or an aryl radical; or an alkoxy radical comprising from 1 to 8 carbon atoms; or an ester radical

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- comprising from 1 to 8 carbon atoms; ~~or an amide radical; or an amine radical or~~
a thiol radical, on condition that at least one of the ortho or para positions of the
phenolic cycle is substituted by a hydrogen;
- ~~is reacted~~ with an aldehyde of formula (III)



- in which R is a dialkoxymethyl group, a 1,3-dioxolan-2-yl group optionally
substituted on peaks 4 and/or 5 by one or more alkyl groups or a 1,3-dioxan-2-yl
group optionally substituted on peaks 4 and/or 5 and/or 6 by one or more alkyl
groups
- in the presence of a base.

3. (currently amended) Process according to claim 2, ~~characterized by the fact that~~
where 1 mole of phenol of formula (II) is reacted with 0.1 to 10 moles of aldehyde of
formula (III) in the presence of 0.1 to 2 moles of base.

4. (currently amended) Process according to claim 3, ~~characterized by the fact that~~
where 1 mole of phenol of formula (II) is reacted with 0.1 to 5 moles of aldehyde of
formula (III) in the presence of 0.1 to 1 mole of base.

5. (currently amended) Process according to claim 2, ~~characterized in that the~~
where said base is constituted by a tertiary amines.

6. (currently amended) Process according to claim 5, ~~characterized in that the~~
where said base is constituted by tributylamine or triethylamine.

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7. (currently amended) Process according to claim 2, ~~characterized in that the~~
where said base is a hydroxide of alkali metal.
8. (currently amended) Process according to claim 7, ~~characterized in that the~~
where said base is constituted by sodium hydroxide or potassium hydroxide.
9. (currently amended) Process according to claim 2, ~~characterized in that the~~
where said base is a carbonate of alkali metal.
10. (currently amended) Process according to claim 9, ~~characterized in that the~~
where said base is sodium carbonate or potassium carbonate.
11. (currently amended) Process according to claim 2, ~~characterized in that where~~
the product of formula (III) is dimethoxyacetaldehyde, diethoxyacetaldehyde,
dibutoxyacetaldehyde, 2-formyl-1,3-dioxolane or 5,5-dimethyl 2-formyl 1,3-dioxane.
12. (currently amended) ~~Use of the A synthesis intermediate comprising~~ phenolic
compounds of formula (I) ~~and or~~ their salts with the alkali metals, alkaline-earth metals
and amines, according to claim 1, ~~as synthesis intermediate.~~
13. (currently amended) A process for the preparation of phenolic resins without
formaldehyde comprising: synthesising a phenolic resin with ~~Use of the phenolic~~
compounds of formula (I) ~~and or~~ their salts with the alkali metals, alkaline-earth metals
and amines, according to claim 1, ~~as intermediate for the preparation of phenolic resins~~
~~without formaldehyde.~~
14. (currently amended) A process for the crosslinking of polymers without
formaldehyde comprising crosslinking said polymers with ~~Use of the phenolic~~
compounds of formula (I) ~~and or~~ their salts with the alkali metals, alkaline-earth metals
and amines, according to claim 1, ~~as crosslinker without formaldehyde.~~

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15. (currently amended) A process for the crosslinking of a substrate without formaldehyde comprising crosslinking said substrate with Use of the phenolic compounds of formula (I) and or their salts with the alkali metals, alkaline-earth metals and amines, according to claim 1 , ~~as crosslinker with a cellulose substrate, a non-woven substrate, of nylon, of polyester, of glass.~~

Add new claims as follows:

16. (new) The process of claim 15 wherein the substrate is selected from the group consisting of a cellulose substrate, a nylon substrate, a polyester substrate, and a glass substrate.

17. (new) The new phenolic compounds according to claim 1 where said halogen is selected from: chlorine, fluorine, bromine or iodine.